

YOUTH-LED ENVIRONMENTAL AWARENESS: INITIATIVES TOWARDS
A JAIN FAITH COMMUNITY EMPOWERMENT

Joseph R. Otterbine

Thesis Prepared for the Degree of

MASTER OF SCIENCE

UNIVERSITY OF NORTH TEXAS

August 2014

APPROVED:

Pankaj Jain, Committee Chair

Doug Henry, Committee Member

Alicia Re Cruz, Committee Member

George James, Committee Member

Lisa Henry, Chair of the Department of
Anthropology

Thomas Evenson, Dean of the College of
Public Affairs and Community Service

Mark Wardell, Dean of the Toulouse Graduate
School

Otterbine, Joseph R. Youth-Led Environmental Awareness: Initiatives Towards a Jain Faith Community Empowerment. Master of Science (Applied Anthropology), August 2014, 61 pp., 2 tables, 5 figures, bibliography, 23 titles.

This project employs participatory action research methods in efforts to create a community specific environmental curriculum for the high school age youth at the only Jain faith community in the North Texas region. Aligned with the community's goals, the youth led in deciding, creating, and carrying out initiatives that were aimed at increasing the level of awareness about environmental issues amongst community members. The research done by the youth aimed at looking at environmental issues through the lens of Jain doctrine. The final creation of a curriculum as a living document to be used by the youth in efforts to promote critical thinking skills and class discussion continues the participatory model. The curriculum encourages experiential and interpretative learning, which grants ownership of the topics to the youth themselves and ultimately empowering them to learn more and spread the importance of being environmentally friendly.

Copyright 2014
by
Joseph R. Otterbine

ACKNOWLEDGMENTS

Jai Jinendra,^a

First and foremost I owe this project to the amazing youth in the Jain Society of North Texas and the supportive community members. This project would not have been possible without their inspiration and hard work. Their contagious enthusiasm about this project has influenced my perceptions of anthropology and how I am going to practice it in the future.

Secondly, I would like to thank my advisors Dr. Pankaj Jain, Dr. Doug Henry, Dr. Alicia Re Cruz, and Dr. George James for their patience and honesty during the twists and turns of my research process. I am indebted to them for their guidance and encouragement through my graduate experience at the University of North Texas (UNT).

Thirdly, I received endless support and feedback from my parents, Joseph and Robin Otterbine, my sister and brother-in-law Katie and Nate Rosso, my aunt and uncle Debbie and Steve Hulce, my cousin Sara Hulce, and my many fraternal brothers. Even though “what I do” is sometimes foreign to them, they continually gave encouragement and a listening ear as I traversed my graduate carrier. I would also like to thank the solidarity, advice, and constructive criticism that my fellow graduate students gave me throughout my time here at UNT. I would also like to thank all the faculty and staff in the department of anthropology. Each and every member of the department always left their doors open, even to talkative people like myself.

^a Jai Jinendra (Jaya Jinēdrā) is a common greeting amongst Jains. When translated it means, “honor to those who have conquered themselves.”

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	iii
Chapters	
I. INTRODUCTION.....	1
II. DESCRIPTION OF APPLIED THESIS PROJECT.....	3
The Community.....	3
Research Goals.....	4
III. CONTEXT OF WORK.....	6
Jainism.....	6
Jain Taxonomy.....	6
Ahimsā.....	7
Spiritual Environmentalism.....	8
Environmental Perceptions.....	13
Participatory Action Research.....	17
IV. PROJECT DESIGN.....	19
Participatory Research.....	19
Environmental Fair.....	20
Interviewing Their Parents.....	22
Data Collection Methods.....	23
Participant Observation.....	24
Semi-Structured Interviews.....	24
Group Reflection and Workshop.....	25

Data Analysis	26
V. FINDINGS	27
Perceptions of the Environment.....	27
Natural Environment.....	28
Animals and the Environment	28
Environmental Effects	29
Jainism and the Environment.....	30
Practicing Jainism	31
Youth Practices	31
Youth and Adult’s Practices	32
Activism.....	33
Environmentalism and Jainism.....	34
Environmental Learning	36
Mobility.....	38
Experiential Learning.....	38
Veganism	39
VI. DESCRIPTION OF DELIVERABLE.....	41
Interpretative Learning.....	41
Project Based Learning.....	44
VII. REFLECTION.....	50
APPENDICES	52
BIBLIOGRAPHY.....	60

CHAPTER I

INTRODUCTION

I like to describe much of my life as a series of serendipitous events that coalesce into some sort of semi-cohesive journey. You can call me absent-minded, or a good judge of which trail to follow. Either way the process of finding, creating, and conducting this thesis project can find itself within the confines of that description. To paint a picture of where I began my journey into the world of religion and ecology I need to take you to the winter of 2012. I began a research assistantship with Dr. Jain and the Hindu American Seva Communities' (HASC), EcoDharma project. I discuss more about this project later on in the paper. With the assistantship we went to many South Asian faith communities, mainly Hindu and one Jain, in the Dallas-Fort Worth area. At these communities we discussed topics related to *dharma* and ecology, or the duty of individuals to take part in protecting and conscientiously interacting with the natural environment in accordance with their religious teachings. Many faith communities, not only South Asian, have hoisted the environmentalism banner.

One such community is the Jain Society of North Texas (JSNT). Dr. Jain had previously assisted JSNT in taking advantage of a grant that helped fund infrastructural changes at their facility. This not only decreased the energy cost, but also decreased their temples environmental footprint. Continuing with the conviction to become more environmentally friendly, JSNT realized that technology could not solve issues of habit; there needed to be lifestyle changes. In the spring of 2013 Mr. Jinen Adenwala, a member of the finance committee at JSNT came to Dr. Jain with the idea of creating a community garden on a plot of land that the temple owns. He was also curious if the project could be done with the assistance of the temple's youth. Dr. Jain, in efforts to see if this would be a feasible thesis project, raised the idea to me. I was reluctant at

first because I know next to nothing about how to garden. However, I came up with the idea of creating some sort of educational material that the temple youth could use in efforts to increase their environmental awareness. This increased awareness could help facilitate the creation of a community garden in the future.

There were some differences in opinions at the temple about the pursuance of a community garden. Some elder community members' opinions on gardening, in line with historical precedence amongst the Jain community and interpretations of Jain philosophy, did not agree that the creation of a community garden would be feasible. However, the creation of some sort educational material was of interest to them. I drafted a preliminary proposal for the Jain Society of North Texas on how I could assist with the creation of an environmental education manual for the temples high school age youth group. This was given to Jinen shortly before the end of the spring 2013 semester and my entrance in to a six-week in-depth Jain studies program in India for the summer. We agreed to revisit the project at the start of a new school year for the youth and myself in September 2013. I met with the youth group on September 29 to discuss with them the idea and their interest in the project. They were very enthusiastic about the project and hit the ground running with ideas on what they could do with it.

CHAPTER II

DESCRIPTION OF APPLIED THESIS PROJECT

The Community

Before I go in to detail about the creation of the final proposal, the following is a short description of the community. Jainism is an ancient Indian religion akin to Hinduism and Buddhism. The tradition was rediscovered, because Jainism is believed to have always existed, approximately twenty-five hundred years ago by *Mahāvīra*, a contemporary of the Buddha. Some might call him the founder of the modern Jain community. One of the major pillars of Jainism is the emphasis on *ahimsā* or non-violence; this is discussed in detail later in the paper (Long 2009). It is important take note that *ahimsā* is the driving force behind the way Jains interact with the natural world. Grasping this helped inform the project in understanding how environmentalism is practiced by Jains.

The Jain Society of North Texas (JSNT) was established in 1982 in north Dallas. JSNT has two campuses, one in north Dallas that houses the main community facility. The second property in Garland is home to the community Garland Paduka. *Paduka* are ancient Indian footwear and their representation at the Garland property symbolizes the footsteps of *Mahāvīra* and the importance to “live and let live.” The temple’s mission is stated below:

The primary mission of JSNT is to facilitate and promote the religious practices of Jain Religion, a very ancient religion of India based on the principles of non-violence and peaceful coexistence of all living beings. To that end the Society is dedicated to mobilizing the Jain Community in the North Texas to actively pursue opportunities for working with multi-faith groups in promoting peace and harmony throughout this region. An important part of the overall mission is to allow the youths of the Society to discover their own identity with a very purposeful life of spirituality and universal understanding through accommodation of diverse views and helping their fellow beings. (<http://www.dfwjains.org> 2014)

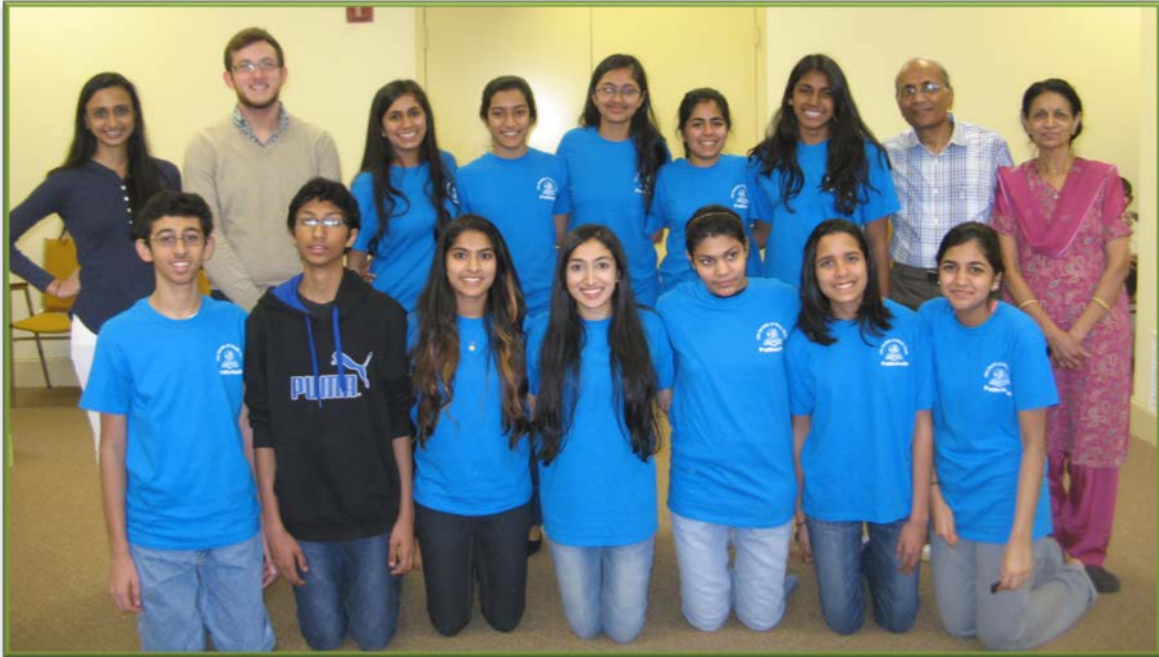


FIGURE 1. *Image of some of the Pathshala youth, the Pathshala class instructors, and myself after the environmental fair*

As the mission statement presents, JSNT values the importance of helping their youth in developing critical thinking skills and increasing conscientious actions. This is important to note, because this project was conducted specifically with the high school aged (14-18) *Pathshala* 6 youth group (FIGURE 1). *Pathshala* combines the terms *path* = study with *shala* = school which roughly translates as the study/school of Jain philosophy and practice. There were approximately twelve students in attendance on average per Sunday class.

Research Goals

The intent of this research is to facilitate the youth with the creation of a community specific environmental curriculum through a participatory action approach. The original proposal that I gave to the community was not structured around a participatory research model. However, as mentioned earlier the youth took the idea of environmentalism and Jainism and ran with it.

This enthusiasm was contagious and I was not going to stand in the way of the trajectory that they saw in this project. This is discussed in detail later on.

The original research goals still applied in the new participatory model. They are listed below and with my protocol in Appendix A:

- | | |
|-----------|--|
| Primary | What are key components of an environmental education curriculum that are adaptable and useful for Jain youth? |
| Secondary | How do the youth perceive their relationship to the environment?
Where did/do the youth acquire these perceptions?
How does Jain philosophy contribute to these perceptions? |
| Tertiary | Does the application/perceptions of Jain philosophy change between youth (US born Jains) and Indian born Jains? |

CHAPTER III

CONTEXT OF WORK

Jainism

As mentioned earlier, Jainism is an ancient religion with many intricacies that are beyond the scope of this thesis' discussion. However, I put into context Jain taxonomy and the philosophy of *ahiṃsā* (non-violence). Jain taxonomy is important to understand because it helps construct the way that Jains define the lives around them. The philosophy of *ahiṃsā* is essential because it informs Jains about how they should interact with these lives. Similar to many Indic traditions, Jainism ascribes to the concept of *karma* (loosely the law of cause and effect) and the cycle of rebirth (*saṃsāra*). This process is repeated until the person reaches *mokṣa* (liberation from *saṃsāra*). The process of reaching *mokṣa* is strenuous and relies on cleansing oneself of their *karmas*. Causing as little harm as possible is a significant factor in how one reaches *mokṣa* (Long 2009).

Jain Taxonomy

According to Jainism the universe consists of two types of beings, *jiva* (living beings) and *ajiva* (non-living beings). Living beings are categorized as one-sense, two-sense, three-sense, four-sense, and five-sense beings (Table 1). The immobile beings or one-sense beings are earth, water, fire, and air bodies, *nigodas* (sub-microscopic creatures), and plants. These beings only have the sense of touch. The two-sense beings have the senses of touch and taste. Some examples include worms, leeches, oysters, clams, and snails. Along with the previous two senses, the three-sense beings have the sense of smell. Some examples are insects and spiders.

The four-sense beings add the sense of sight. Some examples of these are butterflies, flies, and bees. The five-sense beings have all five senses of touch, taste, smell, sight, and hearing. Some examples of these include birds, reptiles, mammals, humans, gods, and demons (Jain 2014).

Table 1. Jain description of living beings

Type of Being	Senses	Examples of Beings
One-Sensed (immobile)	Touch	earth, water, fire and air bodies, <i>nigodas</i> , and plants
Two-Sensed	Touch, Taste	worms, leeches, oysters, snails
Three-Sensed	Touch, Taste, Sight	insects, spiders
Four-Sensed	Touch, Taste, Sight, Smell	butterflies, flies, bees
Five-Sensed	Touch, Taste, Sight, Smell, Hearing	birds, reptiles, mammals, humans, gods, demons

This structure does not suggest that humans have a hierarchical advantage over beings with fewer senses. On the contrary, the structure suggests that if a human were to harm another five-sensed being that would be the same as harming a human being, including birds, reptiles, and mammals. This structure puts all five-sense beings on the same level.

Ahiṃsā

As mentioned earlier, grasping the Jain philosophy of *ahiṃsā* is important in understanding what the youth mean when they discuss the topic of non-violence. *Ahiṃsā* can be translated as non-violence or non-injury. Practicing *ahiṃsā* is the number one way to decrease ones *karmic* intake, thus improving their chances to escape *samsāra* and ultimately reaching *mokṣa*. This means an individual should strive, to the best of her/his ability, to abstain from causing harm to any living being, in thought, word, or deed. An example of this can be seen in

the Jain diet. Following the classification system in Table 1, Jains are usually vegetarians, thus they only consume one-sensed beings. It is also quite common for Jains to not consume garlic, onions, potatoes, and other root vegetables. They don't consume these because of the violence that occurs with pulling them out of the ground. For example, consuming the root of a plant would kill the plant, causing more violence than consuming the plant's by-products. Also, countless amounts of microbes reside around the roots of these plants and the uprooting would kill these beings. It is also believed that these plants are still living, because they continue to grow after they are cultivated.

Jains realize that to live, a certain amount of violence must occur. The Jain philosophy of *ahimsā* emphasizes the importance of being conscientious about how one acts. There are also levels of adherence in the amount of non-violence a Jain can legitimately cause. This depends on whether they are in the monastic (monks/nuns) or lay community. The lay community, such as the youth at JSNT, is not expected to adhere to the same level of non-violence as monastics. If there is an accessible option a lay Jain can take in decreasing violence, they are expected to take it. This emphasis on conscientiousness is a significant factor in how they interact with the environment and why they are passionate about environmentalism (Long 2009).

Spiritual Environmentalism

The environmental movement in the United States comes in many forms. For this section I start with a background of the rise of spiritual environmentalism in the United States. Second, I construct an in depth literature review of similar previous spiritual environmental initiatives.

Secular environmental movement organizations have been around since the 1960's in the United States. However, the development of spiritual environmentalism and faith-based

environmental initiatives are in their infancy. Some researchers (Ellingson et al. 2012, Smith & Pulver 2009) have shown that faith-based environmental movement organizations seen today have their beginnings in the early 1990's. These organizations are a mixture of non-governmental organizations that partner with local religious communities (e.g. Christian churches) to initiate environmental awareness programs. There has also been a development of faith-based initiatives headed up by religious centers. Organizations and faith communities have created interfaith environment and spirituality conferences, disseminated environmental education materials, initiated community projects for green places of worship, etc. (Ellingson et al. 2012, Fieldman & Moseley 2003).

There were multiple catalysts for this revolution of spiritual environmental movements. According to Smith and Pulver (2009), many secular environmental movement organizations have failed to address ethical issues in environmental degradation and focused on issue based environmental initiatives. Many of the secular environmental movement organizations focused on constructing change through giving only examples of degradation (e.g. global climate change, deforestation, etc.). They proposed that scientific and technological advances needed to be used for thwarting these environmental issues. Many of these organizations gained a significant amount of monetary support from the scientific, technological, and governmental communities because the community change was tested. These issues based initiatives seem to have been losing their productive steam. The failure has come because these initiatives have only attacked the façade of the issues. They have not tackled the value frameworks that guide how humans relate to the natural environment. These new spiritual environmental movements are ways to

concentrate on creating individual personal change towards the environment as opposed to just infrastructural and legislative ones.

There has also been a significant amount of support for the role that faith communities play in environmental movements. In the early 1990s prominent scientists signed an open letter to faith communities to take action. They argued that the state of environmental degradation is in need of both scientific and religious initiatives. Religious leaders have spoken in favor of environmental action. Pope John Paul II and Pope Francis have said that Christians are morally responsible for and obligated to protecting God's creation. Also, the Dalai Lama has pointed out that it is important for environmental stewardship to be led by faith communities (Smith & Pulver 2009, Hitzhusen 2012).

There has been much philosophical research and literature (e.g. Chapple & Tucker 2000 and Jain 2011) about the relationship between Indic religions (Buddhism, Hinduism, Jainism etc.) and the environment. However, applied anthropology has done little work in the area of faith-based environmental movements. The following is some research that has been done amongst faith-based environmental movements in the United States. The majority of this research has been survey research of Abrahamic religions.

In 2009 Smith and Pulver surveyed forty-two spiritual environmental groups in the United States to test their opinions on the environment and what factors shaped these opinions. They focused on the informants' opinions about issues or ethics based environmental work. They describe ethical work as changes on the personal and local community level. This approach seeks to provide the individual with the knowledge and initiative to make changes to their daily life. They defined issues based work as relating to infrastructural changes through the catalyst of political action. This issues approach calls for personal behavior changes within the framework

of policy changes. The informants were overwhelmingly in favor of the ethics based approach. The approach of a community-centered initiative creates a bottom-up reform to the system of knowledge that will disseminate into the political realm. This is better than producing “reform” from above and expecting individual change at the community level.

Similar to Smith and Pulver, Fieldman and Mosely’s (2003) research studied the value frameworks shared by the leaders of these organizations. They conducted their research among Appalachian Christian non-governmental organizations. Fieldman and Mosely’s research showed that the organizations viewed environmental problems as religious and ethical in character, as well as technological and political. Because of this viewpoint they believe that taking action with only political and technological initiatives is futile. They believe there needs to be personal and ethical changes in how people participate and view their relationship with nature. These organizations tried to initiate personal change amongst people in the Appalachian region through educational and outreach efforts. They also prioritized reflection on religious and ethical values. Through these initiatives and priorities the individual underwent a personal transformation that preceded broader social transformation. They observed many single-faith led and interfaith led environmental initiatives. These initiatives involved lectures, pamphlets, hands on activities, etc. for increased environmental stewardship within the Appalachian region.

In comparison to the two previous examples, Hindu American Seva Communities is a not-for-profit organization that is working with Hindu and Jain communities to produce tangible results. The EcoDharma project was launched in 2011 in collaboration along with the Bhumi Project in the United Kingdom. The Bhumi Project has been conducting similar research at the Oxford Center for Hindu Studies in England and has helped produce environmentally friendly programs at temples around the United Kingdom and India. As mentioned in the introduction,

Dr. Jain and I have worked with temples in the Dallas/Fort Worth area in their efforts to become more environmentally friendly. We have helped some of these temples organize green teams that will lead initiatives at the temples. Some of the temples have made infrastructural changes (e.g. Energy Star appliances) and have moved to more renewable resources (e.g. compostable plates instead of Styrofoam). We have also spoken at some of the temples about what steps they can do in the greening process. Dr. Jain has also given lectures at the temples about *Dharma* and Ecology (Chauhan et al. 2010 and Pais 2013).

The initiatives taken by the Hindu American Seva Communities and the Bhumi Project have given clear examples of what applied researchers can do with faith-based communities. There are numerous accounts of faith-based organizations around the United States and the world that are taking environmental initiatives. According to Hitzhusen (2012) there are many interfaith organizations that are gaining momentum. Votrin (2003) argues for the potential for more faith-based environmental movements within the diverse sects of the Orthodox Church. Social scientists have done a great job of observing and shadowing, and questioning and recording the opinions of these organizations. However, applied anthropologists have not taken action with these communities.

As stated in the previous section there has been much philosophical research done on the integration of Indic religions and the environment. However, there is sparse applied anthropological work in this area. As aforementioned, bridges between issues and ethics based environmental movements need to be made (Smith & Pulver 2009). K.D. Warner et al. (2012) suggest that spiritual environmentalism has potential in the endeavors to shape humanity's environmental behaviors. Spiritual environmentalism engages the religious and moral

dimensions of humanity through faith based teachings, ritual practices, and shared behavioral norms (Fieldman & Mosely 2003).

The merging of secular up-to-date environmental knowledge with a community's spiritual knowledge will lead to more environmentally conscientious communities. This is where anthropology comes to play. The anthropologist is situated perfectly as an active liaison between secular/spiritual environmentalism and issues/ethics based initiatives. This applied anthropological research expands upon the increasing work being done with Indic faith communities in the United States. The work being done by Hindu American Seva Communities predominantly has been with Hindu communities (Pais 2013). Their work has yet to be seen with Jain faith communities in the United States. This could very well be due to the demographic differences between the populations. There are many more practicing Hindus than Jains in the United States. There are definitely some cultural similarities between Jain and Hindu practice; however, the rituals and spiritual doctrine within Jainism are different and deserving of particular attention. Jainism has much to offer to environmentalism and animal rights discourse (Laidlaw 2010).

Environmental Perceptions

Perceptions change when the cultural and geographical situations change. I have personally experienced these changes during my time with the Jain Society of North Texas (JSNT) and during my time in India with International Summer School for Jain Studies. There has also been research done on the different perceptions of individuals who are from India and those of diaspora Jains. The most noticeable differences are between Indian born Jains and the United States born/youth Jains. The comparative analysis of perceptions is beyond the confines

of this research. However, understanding some of the research that has been done regarding this topic is important to note. This difference was of substantial significance regarding my construction of JSNTs perceptions of the environment. To produce initiatives that can be conducted by JSNT there needs to be a (re)discovery of Jainism -philosophically and culturally (Cort 2006). This discovery will lend to a more insightful and personal construction of information for the Jain community in North Texas.

Observations have been made about the difference between how Indian and United States born Jains interpret Jain philosophical doctrine. Some of these have been seen in the ethnographic research done by Anne Vallely (2006), Brett Evans (2012) and James Laidlaw (2010). They argue that the philosophical interpretation has shifted from the detachment/renunciation practices of Indian Jainism to the sociocentric/ethical actions within the diaspora community. These increased sociocentric/ethical actions are particularly associated with contemporary environmental and animal rights movements. “In other words, the inward focus that has long characterized the Jain tradition has recently begun to yield to an outward, social perspective, particularly in the diaspora. There is a growing understanding among diaspora Jains of *ahiṃsā* as an ethical priority, rather than a renunciatory tactic” (Vallely 2006:193).

The changing face of Jainism amongst diaspora communities is seen in their understanding and application of *ahiṃsā*. As mentioned in the previous quote from Vallely, *ahiṃsā* has become an “ethical priority” and not a “renunciatory tactic.” The ultimate goal of India born Jains is to use a lifestyle of non-violence (*ahiṃsā*) in the hopes of achieving liberation (*mokṣa*), thus releasing one’s soul from the cycle of rebirth (*saṃsāra*). This is in opposition to how most of the diaspora Jain populous interprets *ahiṃsā*. They apply *ahiṃsā* as philosophy of compassion for the perpetuation and happiness of the community and earth as a whole. Seen in

this way, *ahimsā* is done for compassion, instead of out of a desire to remove oneself from implication in worldly violence (Evans 2012 and Valley 2006).

The ritualistic practices -such as fasting, meditation, and *puja* (ritual)- that are key to daily life for many Indian born and even immigrant Jains are not held as high in importance amongst the first-generation diaspora youth. With respect to the Jain Study Center of North Carolina mentioned by Evans (2012), the older members of the community were much more likely to perform *puja* frequently, as opposed to the youth who might perform *puja* once a month. There have also been dietary changes between how Jains practice in India and diaspora Jains, as well as within the diaspora population. The diaspora population tends to consume alcohol and root vegetables. There has also been an increase in veganism amongst the youth. This is because of the extension of *ahimsā* to the acquisition of dairy products (Evans 2012 and Valley 2006). There have been many ideas as to why this change in perception has occurred. The separation from the lifestyles of the ascetics has been suggested as a reason for the decrease in diaspora desires for worldly separation. As for environmental ethics being stronger amongst the youth population, many reasons were given. Evans' (2012) informants suggested that it was a "benefit" of growing up in the United States. There has been a combination of Jain philosophical doctrine, but also growing up in a society where actions are not solely done for internal improvements. Actions are intentionally done for the betterment of the community as a whole, opposed to intentionally being done for the individual and hopefully the community will benefit afterwards. The active environmental and animal rights movements in the United States have also had an influence on the Jain youth. These are all very influential aspects of United States life that the immigrant Jains did not experience during their time in India (Evans 2012 and Valley 2006).

James Laidlaw (2010) gives another explanation to the reasoning behind this transition. The Jain communities outside of India have less direct interaction with renouncers (nuns and monks). Jain communities in India revolve around the presence of nuns and monks. One receives blessings from, praises the qualities of, gives alms to, hears sermons and is led in meditation by renouncers. Doing these action in the presence of a symbolic representation of renouncers are thought of as second-best substitutes. There have been some renouncers who have traveled overseas in hopes of spreading Jain teachings. However, in the eyes of Indian Jains and some others, these renouncers have lost their credibility because they have been expelled from or considered dissenters of their own monastic orders (Laidlaw 2010).

To fill the hole created by the geographic and cultural distance between the renouncers in India and their overseas homes the diaspora communities are in search of a replacement. What will replace the austere pursuits toward liberation by the renouncers, which is such an integral part of lay Jain life in India? “Eco-Jainism,” a combination of environmentalism and animal rights, purported in a 1990 declaration by a number of Jain organizations in the United Kingdom is being used to fill this void (Laidlaw 2010:63). The rhetoric of the environmentalism and animal rights movements in places like Europe and North America are being realized as defining principles of Jain doctrine. The Jains in these areas are grabbing hold of these movements and advocating for them on account of their natural alliance within Jainism. Many of the Jain youth are taking these movements to heart and modifying Jain traditions of vegetarianism to a more vegan diet favored by their fellow non-Jain activists (Laidlaw 2010).

Participatory Action Research

Participatory action research (PAR) is a paradigm that applied anthropologists can use to situate themselves to help with faith-based communities' efforts in becoming environmentally friendly. PAR is group research, where the community takes part in all aspects of planning, acting, observing, and evaluating. Just as important is the emphasis on self-reflection. Orlando Fals Borda states that participatory research can only truly be PAR if the people are encouraged and supported to critically self-reflect and reflect on the project. This overlap between action and reflection intentionally allows for the project to regularly be reevaluated and for the participants to learn from their experiences. PAR emphasizes the importance of participants to actually do research for themselves that will contribute to the overall project goals (McTaggart 1991).

PAR informed some of the methods taken during the project, thus giving it a participatory approach. The participatory aspects of this project focused on encouraging the creation of interview material and reflections. I expound upon these later in the paper. When approaching the topics of personal interviewing the researchers should present themselves as a resource for the community participants to use. When participants are creating material for their interviews they should feel comfortable in taking ownership in the interviewing process. The researcher has a responsibility to help guide them in the intricacies of interviewing. These include questions creation, structure of interviews, consenting interviewees, and reflection. Guajardo, Guajardo, and Del Carmen Casaperalta (2008) have discussed the importance in role-modeling when it comes to helping with the interviewing and reflection process. There is also an importance in relating the value of this research to the youth. The researcher should frame the research process as an opportunity to gain experience and knowledge on community-based or

participatory research (Guajardo, Guajardo, and Del Carmen Casaperalta 2008, McTaggart 1991).

CHAPTER IV

PROJECT DESIGN

Malleability has been essential in the overall design of this project. The original timeline had me starting data collection in October 2013 and presenting the deliverable to JSNT in January 2014. Unforeseeable circumstances (e.g. scheduling conflicts, IRB, methodological changes, and Mother Nature) had other plans for the timeline. Going into this project I had created a proposal that laid out the process I was going to take to produce an environmental curriculum for JSNTs youth group. However, following what I mentioned in the introduction about the youth taking ownership of the project's topics and coming up with their own goals, I began to change my project design.

In the following section I outline the evolutionary process this project design went through. First, I illustrate how these methodological changes began to resemble a participatory approach. Second, I discuss data collection and end with a short description of data analysis.

Participatory Research

After meeting the youth on September 29 and discussing with them the project idea of creating an environmental curriculum that integrates Jainism with environmentalism my original project design began to change. When I introduced myself to the class and told them what I was interested in doing, they began to brainstorm about what they could do to help with the project. This was different from what I had originally thought would happen. I thought I would go into the class and introduce myself. From that moment on I would set up interviews and conduct participant observation all with the goal of using the data to create a curriculum. The youth had a different plan in mind. They took the idea of Jainism and environmentalism and ran with it. They

began to come up with ideas of cleaning up a park, cleaning JSNTs temple, doing a neighborhood wide interfaith environmental fair, but ultimately settled on doing an environmental fair for JSNT. This enthusiasm was contagious, their energy and initiative fueled the restructuring of the project. The project became their project, and we were the researchers.

As stated earlier, this project was not participatory action research (PAR), however there are aspects of PAR at use. The researchers are the youth. They did much of the research that was included in the environmental curriculum. They conducted interviews and lead discussions with their families about the relation of Jainism to environmentalism. They reflected on the project, what they have learned, and what they wanted to see in the deliverable.

Environmental Fair

The *Pathshala* 6 class created all aspects of the JSNT Environmental Fair. From its inception I consciously stayed out of the organization, creation, and execution of the Fair. I only contributed when asked for my opinions. The youth decided on the topics of energy and electricity, veganism, transportation, water usage, and methane production and how they can be looked at through a Jain lens. They split into five groups and prepared presentations, visuals, and takeaways (e.g. vegan brownies, pamphlets, fact sheets, water usage calculator, etc.) for their booths at the fair. At ten in the morning on February sixteenth the Fair started. It began with time for the community to walk around and see the booths, followed by a presentation from Dr. Pankaj Jain on the topic of *Dharma* and Ecology (FIGURE 2 and 3).



FIGURE 2. *Image of group members at the Environmental Fair’s Veganism booth*

FIGURE 3. *Image of group and community members at the Environmental Fair’s Water booth*



After his short lecture the community members were urged to visit the five different presentations at the booths set up around JSNTs community center (FIGURE 4). Upwards of seventy community members showed up for the Fair; the members ranged from elderly to young children. Many of the parents of the youth were there. The community in attendance was extremely receptive to the youth’s efforts and proud of all the work that they had done in putting together all the intricacies of the Fair. When it came to the scheduled end of the Fair, some community members were asking for more time to explore all the work that the youth had done.

FIGURE 4. *Image of community members walking around and visiting different booths at the Environmental Fair*



This event was successful because the youth wanted to do it, resulting from their ownership of it. This enthusiasm was palpable in their presentations, their attitudes, and their interactions with the community. The Fair succeeded in fulfilling the project's goals of getting JSNT to look at environmental issues and how they, as Jains, are poised as natural environmentalists. This project not only succeeded in educating the community on these topics but the youth themselves.

Interviewing Their Parents

After their Environmental Fair I asked the youth if they would be interested in doing interviews with their parents. They were. After class on March 10 the youth in attendance brainstormed some questions that they thought related to the topic of the project and were curious to know about. The questions that they came up with are listed below:

- 1 | What is the environment?
- 2 | How has it evolved from when you were a child to now?
- 3 | How does Jainism affect your day-to-day life?
 - a. How do your Jain actions relate to the environment? (examples)
- 4 | What do you do for the environment and how can you change?
- 5 | What can we do as a Jain society to be more environmentally friendly?

6 | Is there anything that is not being seen eye to eye or that is controversial?
(between parents and yourself)

The interviews with their parents were created and conducted by the youth. The reason for these interviews was to facilitate the youth in gaining experience in the data collection process. They also facilitated inter-generational communication between the youth and their parents on the topic of Jainism and the environment.

I gave a definition of structured and semi-structured interviews. I explained to them the process and importance of getting consent from the interviewee. After discussing the nuances of conducting interviews I described that these interviews were theirs. They can conduct them in anyway that they want. This could be over dinner, on the way to school or temple, informally or formally, etc. I gave them until April 9 to finish their interviews. Five members of the youth ended up participating in interviews with their parents. I had conducted semi-structured interviews with four of them before and one who I had not. I encouraged them to reflect on their interviews and on April 9 we held a group reflection and workshop, which is discussed in the following section.

Data Collection Methods

The primary methods I used for data collection were participant observation, semi-structured interviews, and what I am calling a Group Reflection and Workshop sessions. I had been informally involved with the community since spring of 2012 and began the IRB approved data collection process on January 5, 2014. Recruitment for interviews was done through making announcements during Sunday classes, flyers, and snowballing.

Participant Observation

I regularly attended JSNT Sunday *Pathshala* 6 classes from October 2013 to May 2014. I have conducted approximately fifty-hours of participant observation over a seven-month period. This includes the Sunday classes and community events. During *Pathshala* class I took notes on the days lesson; I participated in class discussion, and asked questions pertaining to the day's lesson. The community events included their morning prayer and the environmental fair. Also, when asked to give feedback on Environmental Fair presentations, I participated along with the class in giving constructive criticism.

Semi-Structured Interviews

Prior to my research I created a series of questions that were aimed to help answer the projects main research questions, as stated in the Description of Applied Research Project section. The interviews ranged from approximately fifteen minutes to an hour. During the process of interviewing, some questions were not asked and others were added. I interviewed above half of the average attendance during their Sunday classes (Table 2). The demographic breakdown of the interview participants is as follows:

Table 2. *Demographics of youth participants*

Grade Level	Freshman	Sophomore	Junior	Senior
Number Interviewed	two	one	three	one
Gender	one female, one male	one female	two female, one male	one female

Four of these interviews were conducted at a local Starbucks in Plano, Texas. This is where a substantial number of the congregation lives. Two of the interviews were conducted over Google

Hangout, due to scheduling conflicts and Mother Nature. One of the interviews was conducted partly over email and over phone call. After I had read through the interviewee's responses over email we talked over the phone about some questions and comments I had.

Group Reflection and Workshop

I conducted three informal group reflections and workshops on April 13, 27, and May 4 during Sunday's class. They were conducted for approximately twenty minutes. The reflections were arranged as a space where the individuals who had participated in interviews and those who had not participated in interviews could discuss their reflections on the topic of Jainism. I also describe them as a workshop because the youth were asked to discuss what they would like to see in a curriculum, especially those who I had not conducted semi-structured interviews with.

The reflections included their opinions on their parents' perceptions of Jainism and the environment. For example, one participant mentioned that their parents' perceptions on being environmentally conscientious are "more of a minor thing. But, I guess talking about it and knowing that we're doing this in class, I guess that kind of changed things for them too." Another participant mentioned that economic reasons were a driving factor as to why their parents conserve. The participants also reflected on the project, the Fair, what they learned, what they already knew, and what they would like to see in the future. The workshop aspect illustrated what they want to do in the future with regards to the environmental curriculum and JSNT environmental footprint. These reflections are expounded upon in the Deliverable section.

Data Analysis

All of the semi-structured interviews and the group reflections and workshops were digitally recorded then transcribed into Microsoft Word. They were coded and then the codes were compiled into a central database document in Microsoft Excel. The data collected from the semi-structured interviews and group reflection and workshop, field notes, prior research, and reflections were used to inform the creation of this applied thesis. The emergent themes that came from this data were analyzed and are represented in the following Findings and Deliverables sections.

CHAPTER V

FINDINGS

This project's primary goal was to identify the key components for an environmental curriculum that would be adaptable and useful for the youth at the Jain Society of North Texas (JSNT). The project produced four major findings that were useful in the creation of the client's deliverable. These major findings are Perceptions of the Environment, Practicing Jainism, Activism, and Mobility. The following section describes these findings and their importance in creating an environmental curriculum.

Perceptions of the Environment

Fully understanding the youth's perceptions of the environment is beyond the scope of this project. However, getting a glimpse at how they describe the environment and their interactions with it is important. The insight that these perceptions lend helped create a visual of where the youth are in their understanding of the environment. This created a base for which the construction of a community specific environmental curriculum was possible.

It is also important to note where and how the youth constructed their environmental knowledge. The youth gave numerous answers to this question. These included: school, media, parents, Young Jains of America (YJA)^b, Jainism, personal studies, experience outdoors, and the JSNT Environmental Fair.

^b YJA is the youth branch of the Federation of Jain Associations in North America (JAINA). JAINA is an umbrella organization that produces education material, sponsors international conferences, and represents Jain communities and philosophies in Canada and the United States of America.

Natural Environment

Three out of the seven youth I interviewed mentioned something similar to the idea that “[e]verything can be environment, including humans, animals, and plants as well as the air and water.” However, four of the seven interviewees, including two of the previous three, made differentiations between natural environment and built environment. The third interviewee mentioned that “there are different types of environments, such as the city environment versus the rainforest environment, and that these different environments have different properties.” The natural environment is separate from humans and is “[w]hat the world is like without human impact.” The natural environment is described as consisting of living organisms. Five of the interviewees suggest that “ecosystems” and “living organisms that are around us, “... [are] what the environment consists of mostly.”

The differentiation between humans and the natural environment was made by a few of the interviewees and how they described the location of the “natural” environment. When experiencing the “natural” environment someone goes “out in nature where there aren’t many humans” or in areas set aside from human development “like parks.” However, a majority of the interviewed recognized that humans are a part of the environment because they are “living beings.” The youth suggested that humans have a significant impact on the natural environment.

Animals and the Environment

When discussing environmentalism in the United States five of the interviewees made a distinction between animal rights and environmentalism. The suggestion is made that environmentalism is an “umbrella” term for which animal rights is underneath. This fits within the concentration on “living beings” as previously discussed in the perception of the natural

environment. The concentration of preserving life and the distinction made between animal rights and other aspects of environmentalism shows that the construction of life is important within these youth's perceptions of the environment. The following is quote from the seventh interviewee, "I know there's the whole environmental aspect of that [animal rights] but I would consider them more of a separate situation and separate topic."

Environmental Effects

The interviewees were very aware of their own and humanity's impacts on the environment. They mentioned many aspects that they believe are causing climate change. They range from topics of consumption, exploitation, destruction, waste, water, electricity, and pollution. One issue that was raised by a majority of the interviewees was that "everything we do in our daily lives has some kind of impact on the environment." The following quote by the third interviewee gives a good summary of how the majority of them think they and humanity have an impact on the environment.

I impact the environment by supporting the production of everything I own. From the house I live in to the car I drive, everything I own and use is made from Earth's resources, generates waste products (Interview 2).

These youth believe that they do and that the process of living does have a "negative impact" on their environmental surroundings.

There were also statements about the cruelty of the meat industry and its negative impact on the environment. In the first interview the second interviewee suggested the following as a negative impact on the environment.

...when you have a world population where the majority consumes meat and what I've learned from my studies; when you have factory farming, that's a huge part of the methane production that occurs and that's also a big part of greenhouse gases and global warming (Interview 1).

The previous statements about animal rights and these on the meat industry give a glimpse into the emphasis on “living beings” within JSNT youth.

Jainism and the Environment

Through this research I also found significance in how Jainism affected the youths’ interactions and perceptions of the environment. Regarding this topic I found that Jainism encourages a harmonious relationship with the environment. I also found that the youth don’t necessarily agree with the sentiment that Jainism is innately environmentally friendly. However, they suggest that aspects of Jain philosophy lend themselves to being more environmentally friendly. Regarding the idea of harmonious relationships, three of the interviewees suggest that Jainism encourages the idea “that all [beings] deserve to live” and that it is important to “[preserve] the environment [...] for the existence of not only our lives, but for all the other lives as well.”

All of the interviewees agree with the idea that Jainism’s environmental friendliness is a convent byproduct of Jain philosophy. The concept of non-violence holds that a Jain needs to “try to minimize how much [they] hurt the plants, how much you hurt the animals, how much you hurt other people, basically through thought, action, words.” This is “[b]ecause, [they] believe that everything has life and [they] shouldn’t destroy it for [their] own good.”

Another aspect of Jainism mentioned by a couple of the interviewees was that of *karma theory*. Within Jainism an individual accrues karma particles. The more bad *karma* that is accrued can cause the individual to be reborn as a human, lower sensed, hellish, or heavenly being. If someone is reborn in another level besides human the chances of reaching *mokṣa* are a lot harder because only a human being can reach *mokṣa*.

Living with the idea with how you live now is going to affect what's going to happen next; you want to live as peacefully as possible. You wouldn't want to commit as many karmas or *paaps* [bad *karmas*] because that would in turn kind of ruin where you're going for the future. You want to get as high as possible; you don't want to have to repeat the birth and death cycle over and over again (Interview 1).

Considering what is stated earlier in the Jain Taxonomy discussion and the description of the importance of "living beings" earlier in this section, the understanding of life is very broad and includes "almost everything living, from air and water to humans and insects." Taking this into account presents how all encompassing the youth's definition of life is and paints a picture of how Jainism plays a role in their perceptions of the environment.

Practicing Jainism

The importance of "living beings" in how the youth interacted with the environment is also seen in how they practiced Jainism. The interviewed youth mentioned the importance of diet and non-violence and how they contributed to their daily routines and actions. Similar to some of the observed perceptual changes mentioned in the earlier Environmental Perceptions section the youth and the adults practiced and perceived Jain philosophy differently.

Youth Practices

Five of the interviewees explicitly mentioned that their diet is a way in which they practiced Jainism. Every interviewee and member of the Sunday class is a vegetarian. Jains tend to have a stricter vegetarian diet, for example one interviewee said that "[o]bviously I'm like a really strict vegetarian. I don't eat eggs and even if I do its like in a cake, rarely." A couple interviewees mentioned that some Jains don't see what is "wrong with eating eggs, it's not like they were fertilized anyways, it's not like it's a life that was lost." They argue that "[i]t was a

potential for life that was lost.” One interviewee mentioned that they try to make sure that what they eat “doesn’t have gelatin” in it. During one of our Sunday classes the consumption of gelatin was discussed and many of the youth said they try to avoid foods with gelatin in it due to the violence used in its creation. Another interviewee mentioned that they “limit as much as [they] can” of onions and garlic in their diet. Their dietary habits are a reflection of the importance of being conscientious. “Jainism teaches you to be conscious from the beginning.”

This carefulness is a way a life for them. In interactions with the environment, one interviewee mentioned that they will not “pluck a flower, don’t walk on grass if [they] don’t have too.” Another mentioned that during the day they try to “[look] at the ground making sure [they’re] not stepping on any bugs.” Of course there are lapses in judgment, they realize that they might make mistakes. However, as one of the interviewees stated:

Jainism has a huge role to play on the things that I do daily. It’s just everything that I do, I think about what is/who is the person that’s either benefiting from my actions or is being harmed because of the things that I do. So, constantly there’s always that process; am I hurting someone, am I doing something good, am I doing something bad, should I be changing what I’m doing? It’s always there in my head and it’s got a huge part to play in my daily life (Interviewee 7).

This quote gives a great picture of how the Jain concept of ahimsa informs how a Jain should act in daily life. All action should be taken under consideration in efforts to avoid any unnecessary or “gross violence.”

Youth and Adult’s Practices

The youth interviewed and those asked in Sunday classes said that in general they practiced Jainism similarly to their parents. These similarities include their dietary habits. The adults in the community are usually as strict about what they eat and how they go about getting it as the youth are. The emphasis on conscientiousness in daily action to decrease violence is of

importance to the parents also. The differences between them are not as noticeable as those mentioned by Valley (2006), Evans (2012) and Laidlaw (2010). However, the youth mentioned that their parents practice rituals differently and perceived Jain philosophy stricter than they do.

Five of the interviewees mentioned that their parents concentrated on conducting rituals more than they do. Their “parents do more religious stuff and pujas and stuff a lot more” than they do. One of the interviewees said “my grandma is really really religious, but I feel like sometimes she just does all the pujas, spiritual, and the ritual but I don’t know how much she actually [knows], she doesn’t really study the scripture.” Another one said that their parents “say their prayers and then they’re done.” Regarding the rituals and practices, some of the youth mentioned that they “don’t understand the purpose of a lot of it.” This view of conducting rituals and being done is different from the importance that the youth place on learning the Jain literature. “We do more of reading the scriptures, sitting down and doing *samayik*^c and doing our prayers and things like that, stuff for your own soul. More than just idolizing another figure or god.” There was one mother and father who shared this similar view, however, the other parents did not.

Activism

I found, along with the many daily actions that the youth take to decrease the amount of violence they cause to living beings, they take other actions in the name of environmentalism. I also got insight into how they think Jainism can play a role within the environmental movement

^c *Samayik* is a Jain ritual where the participants sit in one place, disconnected from their daily lives and actions for forty-eight minutes. During this time they will read religious literature, pray, recite mantras, worship, and meditate.

in the United States. Along with those, I found what aspects they would like to see in an environmental curriculum.

Environmentalism and Jainism

Regarding continued action, the youth mentioned many public actions that they did to better the environment and decrease their negative impact on it. Two of the interviewees mentioned their membership in the Girl Scouts and Boy Scouts as steps they have taken to be more environmentally friendly. The Girl Scout mentioned, “volunteering with cleaning up parks” and the Boy Scout said, “the scout law indicates that we must protect the environment.” Another interviewee talked about their more political actions towards protecting the environment through signing “a petition or write letters to some state legislator. I’ll do that. I’ve written a letter to like SeaWorld. There was a movement to send them all [the letters] to SeaWorld, so I did that.” The Environmental Fair was one of the only specifically public actions that a few of the interviewees and members of the Sunday class had participated in. Recycling was also mentioned by a majority of the interviewees and the members in Sunday classes as one way they participate in being more environmentally friendly. It is one of the “[b]asic things you do every day like recycling.” They are “always looking for ways to recycle things.”

The idea of being conscientious in their consumption habits was brought up by a majority of the participants. In attempts to not support an organization or business that causes violence, Cabelas and McDonalds were mentioned as examples; they will avoid buying stuff from them. One interviewee gave an example of this:

In the situation where we’re eating at a place where meat is served. If I’m eating there with friends I wont pay for them if they’re talking about splitting the check and the meat is on the bill, I will pay for mine separate. It’s kind of like that. (Interview 1)

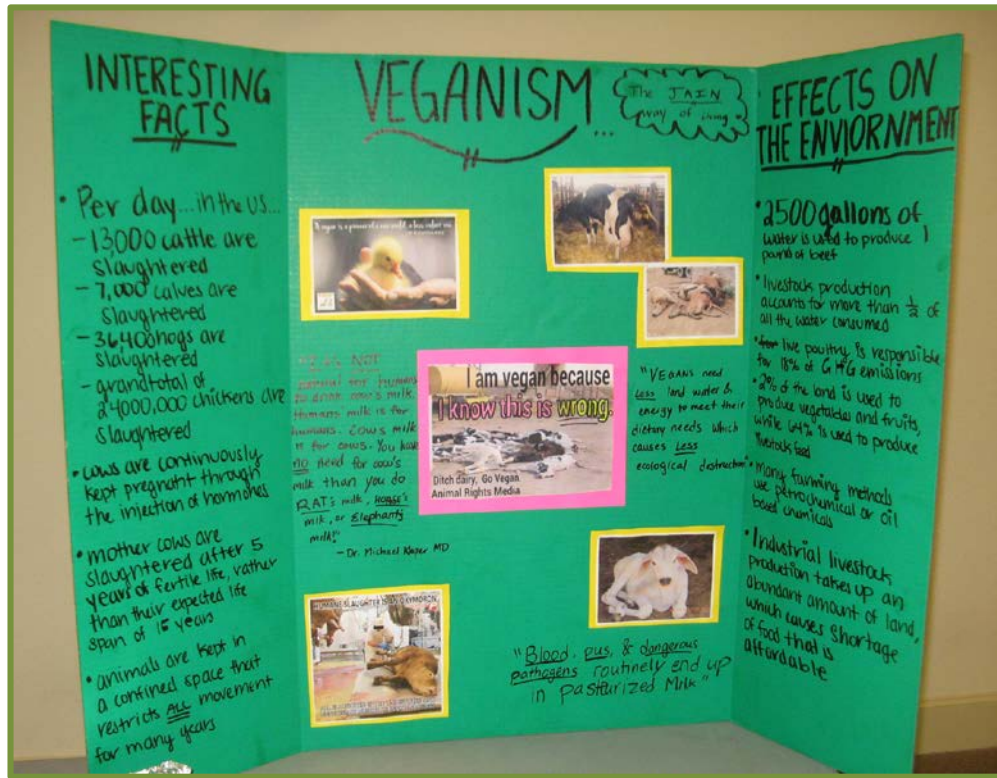


FIGURE 5. Image of a portion of Veganism group’s booth at the environmental fair

Five of the interviewees mentioned that they are interested in becoming vegan (FIGURE 5). One stated, speaking for all Jains, that they “think veganism would be ideal.” Another interviewee mentioned becoming vegan is important, “[b]ecause, when you look at research and the cruelty and everything it is horrible.” One of the youth in the Sunday class is already vegan and an interviewee had been vegan before. When discussing this time the interviewee said:

I did it every Monday for six months. Then I don’t know what happened. It wasn’t that hard for me, I was able to do it. I missed my cheese a lot; I really missed my cheese. I think there will come a point in my life where I might gradually make that change (Interviewee 1).

Another interviewee is “in the process” of becoming vegan, but they mentioned, “it’s really hard to just change all together.” The interviewee said, “I’m trying to cut down as much as I can and hopefully one day I can become completely vegan.” This gives a glimpse into the emphasis on

veganism and why, as Jains, they wish to adapt to that lifestyle. These limitations along with some other ones are discussed in the Finding's Mobility section.

The value that Jainism has for the environmental movement in the United States is twofold. According to a majority of those interviewed and in the Sunday class, spreading awareness of the Jain emphasis on non-violence and conscientiousness is one of them. "First, I think it should start with the youth community." This quote not only speaks to this project's goal but also shows the passion that many of these youth put forth regarding the concept of non-violence. Jainism "can really make people aware how many organisms there are in the world. How every little thing they do does impact the living things around us." The youth are passionate about the idea of using Jainism to;

[raise] awareness, connecting it with, not only with helping the environment but with yourself through, like raising awareness of that, of those kind of things, of how helping the environment also helps with *ahimsa* because you feel bad about yourself and I guess you can reflect on things (Interviewee 5).

Raising awareness by helping others "[understand] what Jainism teaches about nonviolence" some of the youth suggest that these teachings will help others find the value in the environment and cause them to think about living in harmony with it. Many of the youth, interviewed and in Sunday class, stated that events like the environmental fair along with more education materials are a great way of helping raise this awareness.

Environmental Learning

The environmental curriculum that is discussed in the Deliverables section has a significant contribution from the youth. A major factor informing the construction of the deliverable was the youth's ideas of what they would like to see in an environmental curriculum. One of the interviewees said, "I think there should definitely be something more than what there

is right now. Because, I feel like that there is too little or close to nothing.” I found that a vast majority of the youth would like to see “[s]omething that’s more interactive, something that’s more hands on.”

Some of the “hands on” experiential approaches mentioned include outdoor activities, class projects, community gardening, and fieldtrips. In reference to community gardening and outdoor activities, one of the interviewees said the following:

I think that would be probably better. Because, we’re most exposed to environmental information at school and at school there isn’t really any, we can’t really go anywhere. So, I guess in temple, if we could go to a community garden to something like that, that would be better (Interviewee 6).

Another interviewee said the following about experiential learning.

We can also get parent chaperons, so the little kids can come too and have fun. Because, if you, I know most of my stuff through experience. If you’re never going to experience something, what’s the point of learning about it? That’s like the mindset of some people. It’s better to learn about a volcano by going up a volcano than sitting in there [referring to the classroom], even though it’s dangerous. Scuba diving, you can learn about the wildlife about seeing it, **experiencing it** (Interviewee 4).

Those quotes give a glimpse into the desire of the youth to get outside of the classroom and learn about the environment. This is not a ploy to just get out of the classroom; there are advantages to being able to conduct “hands on” learning. Also, as one interviewee said, “humans nature is to have fun, it’s not to sit in a classroom and be bored.”

Many of the youth learned a great deal about the environment and Jainism from the Environmental Fair. One interviewee said the following about her experience from the Fair.

[W]ith the environment fair I learned a lot that I didn’t know before so more of that, being actually able to see facts and how, not just people telling you to be green, you know? But actually able to see the impacts and why I should do something. I think that helps a lot. The Fair helped a lot. Research and listening to other peoples’ presentations, I learned a lot of things that I didn’t know before (Interviewee 5).

This is an example of getting out of the classroom and doing “hands on” learning through research. The research was their own and it was a combined class effort to learn about topics and to share those topics with the community. They learned information and enjoyed doing it at the same time, all while not sitting and listening to lectures. This gives a glimpse into the value of these experiential techniques and how, when employed, they give ownership of knowledge to the youth. Gaining ownership through research and discussion helps with empowering the youth to take action with their newfound knowledge. This ultimately will spread the knowledge of environmental conscientiousness to the Jain and larger communities.

Mobility

This section illustrates some challenges that might face the youth in their future endeavors in becoming more environmentally friendly. I found some parental obstacles to the experiential learning model that the youth are interested in using for their curriculum. There are also some parental and situational complications to the transition to a more vegan diet.

Experiential Learning

Six of the interviewed youth mentioned that their parents and other JSNT adults might have a problem with the creation of a community garden. One of the interviewees said they “definitely know [their] parents would say something about that” and that they “think some of the people might be against that.” As briefly mentioned in the Introduction, adults at JSNT opposed the creation of a community garden due to the direct involvement in violence. Many adults might think that a community garden would “go against some of the aspects” of Jainism. “Because, having a garden that means you have to maintain it, that means you have to do a lot of

soil work as well and that could also lead to killing a lot of *jiva*. A lot of people might have a problem with that.”

Another issue is a lack of support. Some interviewees and Sunday class participants mentioned a lack of cooperation in the youth endeavors last year. Similar to the quote below:

[The] board doesn't really listen to us. Especially last year, we were trying to do stuff but they kept completely ignoring us and thought, no you can't do that. They are not supportive as much as I would like [...] I mean, this year we haven't interacted with them as much because last year we had bad, bad fights and stuff. It was, yeah, people were yelling, bad. I guess, like last year they were super unsupportive, but I guess this year we don't involve them that much in activities and everything. I mean, if we could it would be great, if the board was willing to work with us (Interviewee 5).

Previous experiences with JSNT leaders have left some of the youth questioning the support from the JSNT hierarchy.

Veganism

The topic of veganism has become an area of some disagreement between the generations. As I said earlier, a majority of the youth agreed that becoming vegan is the Jain thing to do. However, there are some issues that make becoming vegan difficult. These included obstacles from their parents and general difficulties of switching to a vegan diet.

A few of the interviewed youth discussed the barriers that parents place regarding becoming vegan. “Our parents won't let us become vegan.” The parents won't let them become vegan because they say that youth are “still growing children and [they] need fat in [their] bones.” One of the other interviewees mentioned that becoming vegan is “something that I want to do; I don't know how practical it is.” The issues in practicality come from their parents. Becoming vegan now is difficult for them “especially right now. [Their] parents make [their] stuff.” One of the interviewees said that it's difficult “right now, living with parents, you can tell

them things but they don't always listen." This shows that the parents might not be too supportive of the change in their children's dietary habits.

For the couple of youth that had supportive parents, they mentioned other hindrances to becoming vegan. One said, "it would be difficult to become vegan for my parents and for me, just as a lot of things in Jainism are difficult to do, such as fasting and intense meditations."

There are not a lot of convenient vegan options in the areas that these families live in. One of the interviewees reflected on her transition to becoming vegan:

"Yeah, for me, I really like food and really like eating all different kinds of things and giving up the food is the hardest part for me. Giving up cheese mostly is the hardest thing. You don't find things outside in restaurants or in peoples houses and it's kind of hard to make do with the little amount of food you can get" (Interviewee 7)

The limited options are proving to be difficult to manage. The combined, parental and situational, obstacles are going to challenge the youth in their efforts in becoming more environmentally friendly. As the previous quote shows along with the already practicing vegans, veganism is possible. However, the transition is going to be trying on the ones looking to make the change. The obstacles presented by parents are going to be more difficult to overcome. This is where the environmental curriculum can benefit the community.

CHAPTER VI

DESCRIPTION OF DELIVERABLE

The deliverable for the Jain Society of North Texas is a community specific environmental curriculum (Appendix B). The curriculum is meant to be supplementary to the current books that are used in the youth classes. It is not a script for a day-by-day lessons or a document combing all knowledge on the topics of environment and Jainism. Instead, it is a living document that continues the participatory aspect of this research project. The document can change over time with the evolving interests and knowledge of different youth demographics. Instead of dictating what needs to be learned to them, the youth are taking charge of what they want to learn. The curriculum encourages critical thinking and discussion based learning, which is facilitated by teachers and lead by the youth themselves. Through many of the youth discussions and interviews about what they think would be useful in the curriculum, there was a concentration on interpretative and projects based learning. After the document was compiled, I asked for any edits and opinions on what the youth and the class teachers would like to see in it. The final document includes all the changes that they asked to see.

Interpretative Learning

The interpretative learning aspect is a way for the youth to critically think about the aspects of Jainism and how they relate to environmental issues. One youth member mentioned that instead of “trying to tie in Jainism with all the ecological thing, but in class tie ecological things to Jainism.” They went on to give an example, “When we get to the unit that talks about one-sensed beings and everything, water, fire, everything, talk about the environment.” The curriculum gives examples of how the youth might go about critically analyzing Jain philosophy

from an environmental point of view. The curriculum gives the example of the *anuvratas* or five small (*anu*) vows (*vrata*). These are *āhiṃsā*, *satya* (to seek and speak the truth), *asteya* (non-stealing), *brahmacharya* (practice restraint and chastity in thought, word and deed), and *aparigraha* (practice non-acquisitiveness and non-consumerism). The *anuvratas* are vows taken by Jain monks and nuns. These vows form a base for the development of a Jain environmental ethic. Looking at these five vows from an environmental perspective will help the youth better conceptualize the direct the relationship between Jain doctrine and environmental stewardship.

The first of the five is the most fundamental, *āhiṃsā Ahimsā paramo dharma* (non-violence is the ultimate duty) (Long 2009). *Ahiṃsā* espouses that the laity be non-violent in thought, word, and deed. The Jain aspect of *āhiṃsā* is applied to all *jivas*. These include all animals, insects, air, water, fire, and earth particles, and vegetation. There is no way to get around living without harming millions of beings. However, it is the duty of a devout Jain to attempt to live as little a violent life as possible (Ramanujam and Singhvi 2006).

This aspect of non-violence has an important role to play in how the Jain laity relate to their surrounding environment. Jainism emphasizes the importance of carefulness in one's actions. The individuals have a responsibility to understand their impact on their surroundings, in order to create as little violence as possible for laypersons to survive. Understanding this creates a moral responsibility for the Jain not to allow the violent degradation of the environment to continue. These concepts in conjunction with each other leave Jains responsible not only for their personal past, present, and future actions towards the environment but those of others (Cort 2006). The second vow is for the laity to seek and speak the truth or *satya*. The concept of truth is also an extension of the Jain emphasis on adherence to the truth in past, present, and future actions. Some are still under the presumption that concepts of development and unending

renewable resources are still out there. This is not only due to purposeful ignorance but also the lies and deceitfulness of people in power. Even the perception that this world can sustainably develop has become the normal discussion amongst environmental activists. Ideas of complacency and self-sustenance not related to economic growth have become inferior to the norms of monetary gain and societal development. The vow of truth can be a useful tool for social change. This could be the *Gandhian* concept of *satyagrah* (insistence on truth) or even the Quaker assertion that struggling for justice oftentimes requires one to “speak truth to power”(Cort 2006 and S. Jain 2012).

The third vow is of non-stealing or *asteya*, this vow asks the laity to behave honestly and never take anything by force or theft. This is a concept that is usually limited to transactions between human beings. The absolute removal and destruction of ecosystems is an example of violent usurpation of the earth’s resources. This is another example of people’s greed for more of the earth’s resources because the more you own the more power you are afforded. There are also significant humanitarian problems that come with the stealing of native people’s lands, farmer’s lands and agricultural property (e.g. seeds). This degradation ultimately is stealing the lives away from millions of people who have, do, and will live on this planet (S. Jain 2012 and Singhvi 2006).

The fourth vow has to deal with the practice of restraint and chastity in thought, word and deed or *brahmacharya*. This could include the individual’s sexual abstinence along with restraint in pleasurable consumption (e.g. food). Many scholars have argued that over population is the cause of increased environmental degradation. There have been discussions that the earth’s carrying capacity has been passed. The concept of restraint is not only applicable in the sexual sense but also in restraint in earthy pleasures of the body, taking pleasures in consumption of too

much food or sweets. For example, the practice of eating so much food because you have the opportunity to, instead of eating the amount needed for sustenance. Another example would be indulging oneself in sloth and laziness. The applicability of these to environmentalism comes in the form of being active in your environmental convictions (S. Jain 2012 and Singhvi 2006).

The final vow has to do with the practice of non-acquisitiveness and non-consumerism or *aparigraha*. The negative effects of living a life of desire for possessions -tangible and intangible- pervade into all of the previous four vows. There are many correlations to environmental stewardship that can be drawn from *aparigraha*. The practice of non-acquisitiveness emphasizes that the laity applies limits to their consumption of possessions. This includes the indulgence in goods that are not necessary for sustenance and daily life. There is no way that the environment will not be affected by an individual's desire for possessions. This consumer capitalistic worldview that intoxicates many of the world's citizens is the leading cause of the earth's environmental problems. Besides the worldwide environmental degradation coming about due to consumerism there has been an increase in global disparities (S. Jain 2012, Ramanujam 2012, Singhvi 2006).

Projects Based Learning

This section includes ideas and descriptions of environmentally based activities that the youth can do. These ideas were all formed by the youth themselves during Sunday discussions, interviews, and the group reflection and workshop.

A Jain carwash:

I think we should have one big project, or something that has the environment and Jainism. I was talking to my mom and she gave me this idea where we have a Jain carwash or something like that. If we want we could raise money with it. You could do it

where you use less water. You would have less water. You know when you go to a carwash they use a lot of water (Group Reflection and Workshop, Participant 6).

Raising awareness:

There should be a month, where each Sunday, we tried to do it but we didn't. Have like a poster hanging or a banner hanging out there where all the kids are, where all the parent congregate in the morning. Have something like that, so we can see it and if it's there every year for one month each year people will know that it's coming. They'll look at the murals and stuff like that, that could be a thing (Group Reflection and Workshop, Participant 1).

I think that maybe there should be a lot more awareness in the community, because... I think I know a brief idea of the kinds of things we would be talking about. But, when we did the environmental fair, I didn't realize how many of the older people were surprised by the statistics that we were giving. Not only for the kids, which is really important to enlighten the kids, the older people need to know what it is we are doing. I guess like more opportunities for them to learn about, how they are impacting the environment (Group Reflection and Workshop, Participant 2).

Competitions between classes:

Make part of the curriculum a competition between the classes on energy usage. So, students are motivated to go to their house and advocate for less energy use to their parents. You could easily see how much energy that each household uses and you divide it by how many people that live in the house, to get per-person energy usage. Whichever class has the least energy use that year or that month gets a prize (Group Reflection and Workshop, Participant 4).

Electrical charging station:

We did this at our school like two years ago, we built, we raised money and built a charging station for electric cars. We could have a charging station here. [...] It doesn't matter how many people have cars now. What matters is, once they see charging stations they're more motivated to get cars. Also, people around the neighborhood, this is a very large neighborhood, can use the charging station as well in that parking lot over there and it would be a good incentive. [...] That could be a big end of the year project (Group Reflection and Workshop, Participant 4).

Recycling:

I know Plano Senior High did this, by their pond they set up two huge racks; they were just two giant bottles that were trying to mimic a water bottle, they were huge. They were trying to raise money to restock their pond, because someone poisoned it earlier and it killed all the fish. What they did, they had a competition... I don't know if it was a completion or not, but there were two large giant water bottles and they had people throw their water

bottles in those giant ones, like actual water bottles and they tried to fill it and they got enough money where they can now restock the pond (Group Reflection and Workshop, Participant 1).

There was also discussion about the community garden and how the gardening aspect could be done at the temple. They also brought up the ideas of spreading the curriculum to other communities and other classes in the temple. The idea of planting flowers was mentioned:

I think not necessarily going out all the time, but something with which you learn it as you're doing. Lecture style is good sometimes but not always. Maybe if the curriculum applies to younger classes, have them each grow little flowers to see how much water it takes for that, or the energy from the sunlight going there.

Start them early (Group Reflection and Workshop, Participant 3 and 1).

There was also discussion on the environmental fair and continuing it in following year and most importantly, implementing changes.

[I]t would be better to actually use those ideas and use them in the temple. Rather than just having, just spreading it to other people we should actually implement them, that we're actually following those ways and that's one way to bring the environment in Jainism (Interview 6).

This effort to focus on environmental issues through a Jain lens has proven to be successful.

Many of the youth mentioned that they looked at environmental issues differently after they had seen the information at the Fair. One said the following in reference to their fellow youth and their parents.

We talked about the environment and things in school, so I knew there. But, on a daily bases I wasn't actually working towards Jain things for the environment. But, after this I was more aware about it and I guess the things I do are more directed towards the environment as well as Jainism now (Group Reflection and Workshop, Participant 6).

The youth that participated in the Environmental Fair did a lot of research and put forth a significant amount of effort to make it a success. The five different groups put together summaries of their topics and those summaries are included in the deliverable. The following are their summaries.

ENERGY AND ELECTRICITY

One of the topics presented was about Energy and Electricity. The population grows exponentially as does energy consumption. Hence, there is a growing demand for energy. The world in which we live in revolves around the use of fossil fuels, which we all know are nonrenewable resources. There is much speculation regarding the seriousness of the situation and many people point to probable reserves as support for the argument that there is still a lot of undiscovered oil and natural gas underneath the earth's surface, so there isn't anything to worry about for a long time. The problem with this idea is that probable reserves are just "probably there". They haven't been found nor have been proven to exist yet, so the counter argument is that we are close to depleting our natural resources. In fact, if you were to disregard probable reserves oil and natural gas will be depleted within 70 years, which is with the lifetime of today's youngest generation. Through the course of our presentation we presented alternative methods of harnessing energy through hydroelectric dams, solar cell systems, wind farming, etc. Through a Jain lens, it is easy to see why we as Jains should discount dams and wind farms as they pose threats to nature and wild life. The construction of dams distorts the migratory patterns of fish and surrounding wild life, while also cutting off parts of nature from its water source. The massive blades on the wind fans easily kill birds and are also responsible for disrupting their flight patterns as well. In addition, the wind farms produce insane amounts of noise pollution. What we proposed at the end of our presentation is that solar energy is clearly the cleanest and most environmentally friendly way to harnessing energy, and the best part is that it is already available for use by homeowners and businesses.

VEGANISM

Veganism was another one of the topics that was presented at the Jain Dallas Environmental fair. The students of this group spoke about the benefits of going vegan from a Jain and environmental aspect. Not only does the dairy industry cause immense pain to the tortured animals like cows and chickens, but it also leads to a large amount of water consumption, land degradation, climate alterations, and gas emissions. While it only takes one acre of land to produce 40,000 lbs of cherries, potatoes, and other fruits and veggies, one acre of land can only produce 250 lbs of beef. At the same time, there is more land necessary to maintain animals rather than planting fruits and vegetables. 70% of water is used on farming and of that, the water that is used to clean waste is dumped into the ocean which pollutes the water and kills many sea creatures. From a Jain standpoint, the cows and chickens which produce milk or eggs receive horrible treatment and are forced to live in confined areas where they can't even move. Most of the time these animals are beaten by the farmers and the cows are continuously kept pregnant to maintain milk production. The calves are then sent to slaughter houses. While many Indians may question the health aspect of becoming a vegan, it is proven that dairy products are not necessary for the survival of a human after the stage of a baby. There are many alternatives to dairy products such as soy and almond milk, soy cheese, and various other products from whole foods or central market. By converting to veganism, you would be saving the environment as well as shedding the karma that each soul acquires by encouraging the dairy industry.

TRANSPORTATION

For the transportation part of the fair, we covered the effects of transportation on the environment, how to reduce these effects and its impact on Jainism. We discussed CO₂ emissions from different types of vehicles (hybrids, standard gasoline, electric), utilizing public transportation, the greenhouse effect and how all the factors that go into our carbon footprint are directly impacting ourselves.

METHANE

Methane is an odorless and colorless gas made by anaerobic bacteria on land and deep in the ocean. It is the 2nd most abundant greenhouse gas in the atmosphere second to CO₂. Natural gas and petroleum systems are the largest source of CH₄ emissions from industry in the United States. Domestic livestock such as cattle, sheep, and goats produce large amounts of CH₄ as part of their normal digestive process. Methane is generated in landfills as waste decomposes and in the treatment of wastewater. Upgrading the equipment used to produce, store, and transport oil and gas can reduce many of the leaks that contribute to CH₄ emissions. Methane can be reduced and captured by altering manure management strategies at livestock operations or animal feeding practices. Not eating foods that promote this industry to grow will also help. Emission controls that capture landfill CH₄ are an effective reduction strategy. Also, reducing the amount of waste that you produce can decrease the size of landfills over the years.

WATER

Even though 75% of the earth's surface is covered in water, only 2.5% of it is fresh and 2/3 of that is frozen. This makes water an extremely precious resource, something that many people fail to understand. A huge number of large rivers including the Colorado, Rio Grande, Ganges, and Nile are not so over tapped by humans that they discharge little to no water into the sea for months. In addition globally our water use has been growing at twice the rate of population growth in the last century and here in the United States, twice the global average is used. Over tapping also causes countless freshwater species to die and they are becoming extinct at twice the rate of saltwater species. Clearly, over using water is a huge crisis and measures must be taken in order to conserve water. Vegetarianism is actually very beneficial in conserving water; livestock production accounts for more than half of all the water consumed in the United States.

Besides the compilation of all this information and the examples given about critically thinking about Jain philosophy from an environmental perspective, this deliverable was created by the youth. The ideas for what is to be in it and the topics to discuss were of their making. Following

the previous section is a resources section that includes websites and books that can speak to the topic of environment and Jainism.

CHAPTER VII

REFLECTIONS

To restate what I said in the introduction, I describe much of my life as a series of serendipitous events. This is evident from my entrance into this program not knowing what applied anthropology was to my newfound passion for participatory research. Anthropology has proven itself as a phenomenal tool, not only with regards to this project, but also for my life. This project has been one of the most fulfilling experiences of my academic carrier.

As mentioned earlier in this paper, the youth took the ideas of this research and ran with them. Understanding that they were taking action, I quickly realized that this project was just as much, if not more, theirs. Noticing the excitement that the youth showed, I began to make changes to my project, specifically the Environmental Fair. Going through the process of discussing what they wanted to do with the Fair, I realized that they were learning so much more from doing individual research than they ever could only out of a book. Most importantly they were valuing the research, and they were having fun. I found it rather intuitive that the youth should be making the decisions on what they want in the curriculum, and that they should be conducting research and interviews.

After reflection on this, I realized that participatory research was the most beneficial methodology for this project. However, I did not have enough knowledge about participatory research, let alone how to employ it. This adaptation to participatory research could not have been successful without the guidance of Dr. Alicia Re Cruz. Our weekly discussion along with my own research helped me understand the best ways to employ participatory research. I found that there is a lack of participatory research within applied anthropology that deals with environmental education.

This project has presented how useful participatory research is as a paradigm for applied anthropology. Especially when dealing with community empowerment. The youth at the Jain Society of North Texas gained infinitely more experience and knowledge from this project because they owned it. The participatory model gives the researcher the ability to work with the community in efforts to create more meaningful results, instead of working for the community and producing a product for them.

APPENDIX A
RESEARCH GOALS AND INTERVIEW PROTOCOL

	Research Question	Specific questions
Primary Goal	What are key components of an environmental education curriculum that are adaptable and useful for Jain youth?	Questions in following fields will serve to answer the primary research question/goal.
Secondary	How do the youth perceive their relationship to the environment?	<ul style="list-style-type: none"> - How would you define the environment? - How do you think humans have an impact on the environment? - How do you think you have an impact on the environment?
	Where did/do the youth acquire these perceptions?	<ul style="list-style-type: none"> - How do you learn about the environment? - Where do you gain information about the environment?
	How does Jain philosophy contribute to these perceptions?	<ul style="list-style-type: none"> - How important is Jainism to you? - How do you think Jainism impacts you daily? - How does Jainism view the environment? - Is Jainism “environmentalist?” Would that fit you? - Does being a Jain make you treat the environment differently? How? - How does Jainism make you different than others? - Do Jain’s think about the environment differently? How?
Tertiary	Does the application/perceptions of Jain philosophy change between youth (first generation) and diaspora Jains?	<ul style="list-style-type: none"> - How would you define ahimsa (non-violence)? - How do your parents/children apply Jain practice in their daily life? - Do they do so in a differently than you? - To what extent, if any, have your practices changed since you moved to United States? DFW? (rituals, routine, mobility, etc.) - Do you think you see the environment differently than other Indian religions? other students at school? other coworkers?
Follow up questions will be dependent on the participants’ answers.		

APPENDIX B
DELIVERABLE

INTERPRETATIVE LEARNING: Interpretative learning is a way for you to **think critically** about Jainism aspects and how they relate to environmental issues.

During *Pathshala* Group 6 classes, maybe once a month or once every other week, look at the topics that you are going over in your usual lessons and ask yourself this question:

- **Does this topic relate to the environment or any environmental effects?**
- After you have done that, look into how you might be able to change your interactions with the environment by applying those Jain concepts.

The following is an example of looking at the *anuvratas* from an environmental perspective. This example is not finite and you can find many other examples of the relation between the *anuvratas* and the environment through critical analysis and class discussion.

<i>Anuvratas</i>	Environmental Lens
<i>Ahimsā:</i> non-violence.	<ul style="list-style-type: none"> • There is no way to get around living without harming millions of beings. However, it is the duty of an abiding Jain to attempt to live as little a violent life as possible • A responsible Jain is obligated to not allow the violent degradation of the environment to continue. • Should be more conscious of surrounds in order to create as little violence as possible. • Examples of change: carpool, recycle, public transit, vegetarian, vegan, watch your step, etc.
<i>Satya:</i> seek and speak the truth.	<ul style="list-style-type: none"> • The earth and the resources it possesses can only support so much development. • Mankind is still under the assumption that concepts of development and unending renewable resources are still out there As someone who is more environmentally conscientious you already possess the knowledge that unending development, sustainable or not, is not the solution. By doing this you are following the concept of <i>satya</i>.
<i>Asteya:</i> non-stealing	<ul style="list-style-type: none"> • This is a concept not limited to actions done between human beings. The absolute removal and destruction of ecosystems is an example of violent usurpation of the earth's resources. • There are also significant humanitarian problems that come with the stealing of native people's lands, farmer's lands and agricultural property (e.g. seeds). This degradation ultimately is stealing the lives away from millions of people who have, do, and will live on this planet.
<i>Brahmacharya:</i> practice restraint and chastity in thought, word and deed.	<ul style="list-style-type: none"> • The concept of restraint is not only applicable in the sexual sense but also in restraint in pleasurable consumption (e.g. food). Taking pleasures in the consumption of too much food or sweets. • The practice of eating so much food because you have the opportunity to, instead of eating the amount needed for sustenance. This can also include indulging yourself in sloth and laziness. • The applicability of these to environmentalism comes in the form of being active in your environmental convictions.
<i>Aparigraha:</i> practice non-acquisitiveness and non-consumerism	<ul style="list-style-type: none"> • Overconsumption is the major cause of the earth's environmental problems. • This consumption includes the indulgence in goods that are not necessary for sustenance and daily life. • There is no way that the environment will not be affected by an individual's desire for possessions. However, the emphasis <i>aparigraha</i> places on limiting the consumption of possessions will help to decrease your individual effects.

PROJECTS BASED LEARNING: The projects based section includes ideas and descriptions of environmentally based activities that you can do.

<p>A Jain carwash:</p> <p>“I think we should have one big project, or something that has the environment and Jainism. I was talking to my mom and she gave me this idea where we have a Jain carwash or something like that. If we want we could raise money with it. You could do it where you use less water. You would have less water. You know when you go to a carwash they use a lot of water (Workshop, Participant 6).”</p>	<p>Community garden and gardening at the temple:</p> <p>“I think not necessarily going out all the time, but something with which you learn it as you’re doing. Lecture style is good sometimes but not always. Maybe if the curriculum applies to younger classes, have them each grow little flowers to see how much water it takes for that, or the energy from the sunlight going there” (Workshop, Participant 3).</p>
<p>Competitions between classes:</p> <p>“Make part of the curriculum a competition between the classes on energy usage. So, students are motivated to go to their house and advocate for less energy use to their parents. You could easily see how much energy that each household uses and you divide it by how many people that live in the house, to get per-person energy usage. Whichever class has the least energy use that year or that month gets a prize” (Workshop, Participant 4).</p>	<p>Electrical charging station:</p> <p>“We did this at our school like two years ago, we built, we raised money and built a charging station for electric cars. We could have a charging station here. [...] It doesn’t matter how many people have cars now. What matters is, once they see charging stations they’re more motivated to get cars. Also, people around the neighborhood, this is a very large neighborhood, can use the charging station as well in that parking lot over there and it would be a good incentive. [...] That could be a big end of the year project” (Workshop, Participant 4).</p>
<p>Raising awareness:</p> <p>“There should be a month, where each Sunday, we tried to do it but we didn’t. Have like a poster hanging or a banner hanging out there where all the kids are, where all the parent congregate in the morning. Have something like that, so we can see it and if it’s there every year for one month each year people will know that it’s coming. They’ll look at the murals and stuff like that, that could be a thing” (Group Reflection & Workshop, Participant 1).</p> <p>“I think that maybe there should be a lot more awareness in the community, because... I think I know a brief idea of the kinds of things we would be talking about. But, when we did the environmental fair, I didn’t realize how many of the older people were surprised by the statistics that we were giving. Not only for the kids, which is really important to enlighten the kids, the older people need to know what it is we are doing. I guess like more opportunities for them to learn about, how they are impacting the environment” (Workshop, Participant 2).</p>	<p>Recycling:</p> <p>“I know Plano Senior High did this, by their pond they set up two huge racks; [these] were just two giant bottles that [they] were trying to mimic a water bottle, they were huge. They were trying to raise money to restock their pond, because someone poisoned it earlier and it killed all the fish. What they did, they had a competition... I don’t know if it was a completion or not, but there were two large giant water bottles and they had people throw their water bottles in those giant ones, like actual water bottles and they tried to fill it and they got enough money where they can now restock the pond” (Workshop, Participant 1).</p>

Environmental fair:

The creation of an environmental fair is an event that focuses on environmental issues through a Jain lens. The chosen topics could be discussed at a community wide event that was created by you for JSNT or the greater community. The event would aim at not only raising awareness, but also encouraging the implementation of changes, e.g. switching away from Styrofoam to renewable or reusable kitchen ware, recycling, turning lights and fans off, etc.

The 2014 *Pathshala* Group 6 class did a lot of research and put forth significant amounts of effort to make the first ever JSNT Environmental Fair a success. Check out www.veganjains.com for more information on the 2014 Environmental Fair.

For **inspiration and guidance** the youth that participated in the five different groups put together summaries of their topics and those summaries are as follows.

ENERGY AND ELECTRICITY

“One of the topics presented was about Energy and Electricity. The population grows exponentially as does energy consumption. Hence, there is a growing demand for energy. The world in which we live in revolves around the use of fossil fuels, which we all know are nonrenewable resources. There is much speculation regarding the seriousness of the situation and many people point to probable reserves as support for the argument that there is still a lot of undiscovered oil and natural gas underneath the earth’s surface, so there isn’t anything to worry about for a long time. The problem with this idea is that probable reserves are just “probably there”. They haven’t been found nor have been proven to exist yet, so the counter argument is that we are close to depleting our natural resources. In fact, if you were to disregard probable reserves oil and natural gas will be depleted within 70 years, which is with the lifetime of today’s youngest generation. Through the course of our presentation we presented alternative methods of harnessing energy through hydroelectric dams, solar cell systems, wind farming, etc. Through a Jain lens, it is easy to see why we as Jains should discount dams and wind farms as they pose threats to nature and wild life. The construction of dams distorts the migratory patterns of fish and surrounding wild life, while also cutting off parts of nature from its water source. The massive blades on the wind [turbines] easily kill birds and are also responsible to disrupting their flight patterns as well. In addition, the wind farms produce insane amounts of noise pollution. What we proposed at the end of our presentation [was] that solar energy is clearly the cleanest and most environmentally friendly way to harnessing energy, and the best part is that it is already available for use by homeowners and businesses” (Environmental Fair, Participant 1).

VEGANISM

“Veganism was another one of the topics that was presented at the Jain Dallas Environmental fair. The students of this group spoke about the benefits of going vegan from a Jain and environmental aspect. Not only does the dairy industry cause immense pain to the tortured animals like cows and chickens, but it also leads to a large amount of water consumption, land degradation, climate alterations, and gas emissions. While it only takes one acre of land to produce 40,000 lbs of cherries, potatoes, and other [fruits] and veggies, one acre of land can only produce 250 lbs of beef. At the same time, there is more land necessary to maintain animals rather than planting fruits and vegetables. 70% of water is used on farming and of that, the water that is used to clean waste is dumped into the ocean which pollutes the water and kills many sea creatures. From a Jain standpoint, the cows and chickens which produce milk or eggs receive horrible treatment and are forced to live in confined areas where they can’t even move. Most of the time these animals are beaten by the farmers and the cows are continuously kept pregnant to maintain milk production. The calves are then sent to slaughter houses. While many Indians may question the health aspect of becoming a vegan, it is proven that dairy products are not necessary for the survival of a human after the stage of a baby. There are many alternatives to dairy products such as soy and almond milk, soy cheese,

and various other products from Whole Foods or Central Market. By converting to veganism, you would be saving the environment as well as shedding the karma that each soul acquires by encouraging the dairy industry” (Environmental Fair, Participant 2).

TRANSPORTATION

“For the transportation part of the fair, we covered the effects of transportation on the environment, how to reduce these effects and its impact on Jainism. We discussed CO2 emissions from different types of vehicles (hybrids, standard gasoline, electric), utilizing public transportation, the greenhouse effect and how all the factors that go into our carbon footprint are directly impacting ourselves” (Environmental Fair, Participant 3).

METHANE

“Methane is an odorless and colorless gas made by anaerobic bacteria on land and deep in the ocean. It is the 2nd most abundant greenhouse gas in the atmosphere second to CO2. Natural gas and petroleum systems are the largest source of CH₄ emissions from industry in the United States. Domestic livestock such as cattle, sheep, and goats produce large amounts of CH₄ as part of their normal digestive process. Methane is generated in landfills as waste decomposes and in the treatment of wastewater. Upgrading the equipment used to produce, store, and transport oil and gas can reduce many of the leaks that contribute to CH₄ emissions. Methane can be reduced and captured by altering manure management strategies at livestock operations or animal feeding practices. Not eating foods that promote this industry to grow will also help. Emission controls that capture landfill CH₄ are an effective reduction strategy. Also, reducing the amount of waste that you produce can decrease the size of landfills over the years” (Environmental Fair, Participant 4).

WATER

“Even though 75% of the earth's surface is covered [with] water, only 2.5% of it is fresh and 2/3 of that is frozen. This makes water an extremely precious resource, something that many people fail to understand. A huge number of large rivers including the Colorado, Rio Grande, Ganges, and Nile are so over-tapped by humans that they discharge little [or] no water into the sea for months. In addition globally our water use has been growing at twice the rate of population growth in the last century and here in the United States, twice the global average is used. Over tapping also causes countless freshwater species to die and they are becoming extinct at twice the rate of saltwater species. Clearly, over using water is a huge crisis and measures must be taken in order conserve water. Vegetarianism is actually very beneficial in conserving water; livestock production accounts for more than half of all the water consumed in the United States” (Environmental Fair, Participant 5).

RESOURCES

The following are resources related to the topic of environment and Jainism that might help you in your continued learning on the topic. Please note that these are not all the resources available. Add on to this list as you find more.

Websites:

- https://www.academia.edu/5204234/Jainism_and_Ecology
- <http://iseethics.files.wordpress.com/2011/03/bibliography-jainism.pdf>
- <http://fore.research.yale.edu/religion/hinduism/>
- <http://www.arcworld.org/faiths.asp?pageID=7>
- http://www.jainsamaj.org/rpg_site/literature2.php?id=448&cat=42
- http://www.jainlibrary.org/elib_master/jaina_edu/jaina_edu_article/Jain_Way_of_Life_and_Ethical_Living_and_Environment_200002.pdf

- http://www.jainlibrary.org/files.php?alpha=&sid=Languages,Book_File_Name%20desc&page=10
- <http://www.jainology.org/publications/jain-declaration-on-nature/>
- <http://www.jainworld.com/jainbooks/asceticism/ch8.asp>
- <http://www.slideshare.net/Jainausa/jainism-and-environment-12978684>
- <http://veganjains.com/>

Books:

- Chapple, Christopher & Tucker, Mary
2000 *Hinduism and Ecology: The Intersection of Earth, Sky, and Water*. Cambridge, Mass: Harvard University Press.
- Jain, Pankaj
2011 *Dharma and Ecology in Hindu Communities: Sustenance and Sustainability*. Burlington, VT: Ashgate.
- Long, Jeffery D.
2009 *Jainism: An Introduction*. New York: L.B.Tauris
- Ramanujam, Geetha.
2006 *Environmental Awareness in Jainism*. Chennai, India: Pearl Press.
- Vallely, Anne
2006 *From Liberation to Ecology: Ethical Discourses among Orthodox and Diaspora Jains*, pp. 193-216 *In Jainism and Ecology: Nonviolence in the Web of Life*, ed. Christopher Key Chapple. Delhi, India: Motilal Banarsifass Publishers.

BIBLIOGRAPHY

- Chapple, Christopher & Tucker, Mary
2000 *Hinduism and Ecology: The Intersection of Earth, Sky, and Water*. Cambridge, Mass: Harvard University Press.
- Chauhan, Rama das, Haigh, & Rita
2010 Awareness vs. Intentionality: Exploring Education for Sustainable Development in a British Hindu Community. *Sustainable Development* 20:361-371.
- Cort, John E.,
2006 Green Jainism? Notes and Queries toward a Possible Jain Environmental Ethic, pp. 63-94 *In Jainism and Ecology: Nonviolence in the Web of Life*, ed. Christopher Key Chapple. Delhi, India: Motilal Banarsifass Publishers.
- Ellingson, Palk, & Woodley
2012 The Structure of Religious Environmentalism: Movement Organizations, Interorganizational Networks, and Collective Action. *Journal for the Scientific Study of Religion* 51(2):266-285.
- Evans, Brett
2012 Jainism's Intersection with Contemporary Ethical Movements: *An Ethnographic Examination of a Diaspora Jain Community*. *The Journal for Undergraduate Ethnology* 2(2):1-12.
- Federation of Jain Associations in North America (JAINA) Education Committee
2013 *Jain Philosophy and Practice – 2: JAINA Education Series 401 – Level 4*. Carson, CA: Jain Education International.
- Fieldman, David & Moseley, Lindsay
2003 Faith-Based Environmental Initiatives in Appalachia: Connecting Faith, Environmental Concern and Reform. *Worldviews* 7(2003):227-252.
- Guajardo, Miguel, Francisco Guajardo, with Edyael Del Carmen Casaperalta
Transformative Education: Chronicling a Pedagogy for Social Change. *Anthropology & Education Quarterly*. 39(1):3-22.
- Hitzhusen, Gregory
2012 Going Green and Renewing Life: Environmental Education in Faith Communities. *New Directions for Adult and Continuing Education* 133:35-44.
- Jain, Pankaj
2011 *Dharma and Ecology in Hindu Communities: Sustenance and Sustainability*. Burlington, VT: Ashgate.
Jainism and Ecology. N.d. *Jainism and Ecology: A Nonviolent Method to Save the Plant*. https://www.academia.edu/5204234/Jainism_and_Ecology

- Jain, S.M.
2012 Environmental Doctrines of Jainism. Jaipur, India: Raj Printers & Associates
- Jain Society of North Texas
N.d. About JSTN. Jain Society of North Texas. <http://www.dfwjains.org>.
- Laidlaw, James
2010 Ethical Traditions in Question: Diaspora Jainism and the Environmental and Animal Liberation Movements, pp. 61-80 *In Ethical Life in South Asia*, ed. Anand Pandian & Daud Ali. Bloomington, IN: Indiana University Press
- Long, Jeffery D.
2009 Jainism: An Introduction. New York: L.B.Tauris
- McTaggart, Robin
Principles for Participatory Action Research. *Adult Education Quarterly*. 41:168-187.
- Pais, Arthur
2013 Turning Temples in North America Green. *Community News: India Abroad* A39
- Ramanujam, Geetha.
2006 Environmental Awareness in Jainism. Chennai, India: Pearl Press.
- Singhvi, L.M.
2006 Appendix: The Jain Declaration on Nature, pp. 117-224 *In Jainism and Ecology: Nonviolence in the Web of Life*, ed. Christopher Key Chapple. Delhi, India: Motilal Banarsifass Publishers.
- Smith, Angela & Pulver, Simone
2009 Ethics-Based Environmentalism in Practice: Religious-Environmental Organizations in the United States. *Worldviews* 13(2009):145-179.
- Vallely, Anne
2006 From Liberation to Ecology: Ethical Discourses among Orthodox and Diaspora Jains, pp. 193-216 *In Jainism and Ecology: Nonviolence in the Web of Life*, ed. Christopher Key Chapple. Delhi, India: Motilal Banarsifass Publishers.
- Votrin, Valery
2005 The Orthodoxy and Sustainable Development: A Potential For Broader Involvement of the Orthodox Churches in Ethiopia and Russia. *Environment, Development and Sustainability* 7:9-21.
- Warner, K.D., Amara Brook, and Krista Shaw
2012 Facilitating Religious Environmentalism: Ethnology Plus Conservation Psychology Tools Can Assess An Interfaith Environmental Intervention. *Worldviews* 12:111-134